REMARKS/ARGUMENTS

I. INITIAL REMARKS

Applicants amended claims 1 and 9 to improve the clarity and precision of the claims and not for any reason related to patentability. No new matter has been added. Applicants believe that the comments that follow will convince the Examiner that the rejections set forth in the April 26, 2006 Office Action have been overcome and should be withdrawn.

II. THE EXAMINER'S REJECTIONS

The Examiner objected to claims 1 and 9 due to a number of informalities. Specifically, "the selected node" (claim 1, ll. 10 and 11) should be changed to "the at least one selected node"; "the packet" (claim 9, l. 4) should be change to "a packet"; and it is unclear whether "a packet having a payload including the data block" (claim 9, ll. 12-13) is referring to the same packet as lines 4-5 of claim 9.

The Examiner rejected claims 1-18 under the non-statutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,633,570 (hereinafter "the '570 patent"). The examiner contended that:

> Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application have been written to be broader versions of the issued patent claims. Specifically, all of the limitations of both independent claims 1 and 9 of the instant application are already recited in their entirety within claim 1 of the patent. Additionally, claims 2-8 and 10-18 of the instant application depend upon claims 1 and 9, respectively, and are therefore rejected for the same reasons discussed above regarding claims 1 and 9. Office Action dated April, 26, 2006, p. 10.

The Examiner additionally rejected claims 1-18 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,864,559 to Perlman (hereinafter "Perlman") in view of U.S. Patent No. 5,477,536 to Picard (hereinafter "Picard"). The Examiner argued that Perlman teaches:

> [A] method for transmitting a data block over a network (col. 6, lines 48-52) from a first sending node (e.g., node 124, see FIG.1) to a first sent of recipient nodes (nodes 102, 105-107, 122, 123 located in area 131), comprising: in the first sending node (e.g., node 124) dividing the first set of recipient nodes (e.g., nodes in are 131) into a subset of selected nodes (level 2 nodes, 122 and 123 in area 131)(e.g., see col. 7, lines 65-col. 9 lines 20 regarding node processes are performed by each intermediate system node, including arranging the nodes by a spanning tree in process 360; and see col. 5 lines 62-col. 6, line 29 regarding communication nodes being either intermediate or end system nodes and thereafter being respectively referred to as "nodes" or "end nodes", whereby level 2 node 124 is implicitly an intermediate node) that are selected according to scoring criteria associated with each recipient node (e.g., see col. 3, lines 1-27 regarding the spanning tree selecting the least cost pathway wherein the cost is determined by the volume of traffic through the particular links or nodes); and a list dynamically associating the at least one selected node (e.g., level 2 nodes in area 131) with the unselected nodes (e.g., level 1 nodes in area 131) for the transmission of the data block to the unselected nodes (e.g., see col. 6, lines 50-52 regarding transmission of data packets). See April 26, 2006 Office Action, pp. 2-3.

The Examiner conceded that while Perlman teaches a method for transmitting a data block over a network from a first sending node to a first set of recipient nodes, Perlman may not specifically disclose transmitting a packet comprising both a data block and a list of assigned notes. The Examiner contended that Picard teaches a method of transmitting a data block from a sending node to recipient nodes using a novel routing technique, and further, specifically teaches the transmitting includes transmitting a packet having both a data block and a routing list. Additionally, the particular teachings of Picard provide each intermediate node with the ability to send notifications to the

originator node upon congestion, port outages, or other abnormal conditions, resulting gin improved adaptability of system conditions. The Examiner argues that:

> [A]t the time of the invention it would have been obvious to one of ordinary skill in the art to apply the routing method teachings of Picard to the routing method of Perlman in order to provide improved adaptability of system conditions by way of each intermediate node having the ability to send notifications to the originator node upon congestion, port outages, or other abnormal conditions. Office Action dated April 26, 2006, p. 4.

III. THE EXAMINER'S REJECTIONS SHOULD BE WITHDRAWN

A. Claim Objections

The Examiner objected to claims 1 and 9 for a number of informalities. In response, Applicants have amended claims 1 and 9 to improve the clarity and precision of the claims according to the Examiner's comments. No new matter has been added.

B. Obviousness-Type Double Patenting

The Examiner rejected claims 1-18 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of the '570 patent. In response, Applicants have submitted a Terminal Disclaimer herewith to overcome the Examiner's double patenting rejection.

C. 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-18 under 35 U.S.C. §103(a), as being unpatentable over Perlman in view of Picard. Applicants respectfully disagree and submit that none of the claims are rendered obvious in view of the cited references.

According to currently amended independent claims 1 and 9 the present invention provides methods for transmitting a data block over a network from a sending node to a set of recipient nodes wherein the sending node divides the set of recipient nodes into a subset of selected nodes and a subset unselected nodes; assigns the unselected nodes to the selected nodes; transmits to each selected node a packet comprising a list of the assigned unselected nodes and a data block; and repeating the process by the selected nodes until the packet is distributed to the set of recipient nodes. Thus, the present invention enables a node to disseminate a data block to a large number of recipient nodes in the network while effectively utilizing the channel bandwidth.

In contrast, Perlman discloses a method for multicast communication wherein each node must be aware of the topology of its group in order to transmit and receive messages. The node first maintains a list of active nodes, which are its neighbors, by continually transmitting a "hello" message along its links and receiving "hello" messages back from the active nodes. *See* Perlman, Col. 7, ll. 44-62. The node is also responsible for maintaining a list of local link status comprising lists of directly communicating neighboring nodes, their statuses, and the active nodes they are connected to. *See* Perlman, Col. 8, ll. 26-56. Using the above lists, the node calculates a spanning tree, an ordered interconnection of all nodes in the network, to determine the network topology. *See* Perlman, Col. 8, ll. 57-64. The spanning tree is stored in a list form containing all known nodes in the network identified by destination addresses and the transmitting link list which identifies links to correspond with the known nodes. *See* Perlman, Col. 9, ll. 3-20. Importantly, the nodes in Perlman's system merely calculate the existing network topology via an algorithm and the nodes in Perlman's system utilize the spanning tree to

send a message from one node to another. Thus, Perlman does not teach a method capable of disseminating a data block over a network from a sending node to a large number of recipient nodes while effectively utilizing the channel bandwidth. Further Perlman fails to disclose that the sending node divides set of recipient nodes into a subset of selected and a subset of unselected nodes; assigns the unselected nodes to the selected nodes; transmits a packet to the selected nodes comprising a list of assigned unselected nodes and a data block; and the process is repeated by the selected nodes until the data block is distributed to the set of recipient nodes as required by the currently amended independent claim 1 and 9.

Picard is simply cited by the Examiner for teaching transmitting a packet having both a data block and a routing list from a sending node to recipient nodes using a novel routing techniques. The routing list merely indicates the routes to take to send a data block from one end point to another. In Picard's system a node receives a packet containing the data block and the routing list, extracts the routing list, and determines the address to which the packet needs to be forwarded to, and the packet is forwarded from one node to another until it reaches the recipient node. As such, Picard fails to teach a method for distributing a data block over a network from a sending node to a set of recipient nodes while effectively utilizing the channel bandwidth.

Upon reconsideration, the Examiner will undoubtedly recognize that Perlman and Picard individually and in combination fail to disclose the present invention as provided in amended independent claims 1 and 9. In addition, none of these references, alone or in combination, disclose methods for transmitting a data block over a network from a sending node to a set of recipient nodes wherein the sending node divides the set of

recipient nodes into a subset of selected nodes and a subset of unselected nodes; assigns the selected nodes to the unselected nodes; transmits to the selected nodes a packet comprising a list of the assigned unselected nodes and a data block; and wherein the process is repeated by the selected nodes until the packet is distributed to the set of recipient nodes as required by amended independent claims 1 and 9. Since it is black letter law that references, either alone or in combination, used in a 35 U.S.C. §103(a) rejection must teach or suggest each and every claim limitation (MPEP § 2143-2143.03), Applicants respectfully submit that the Examiner's rejection under 35 U.S.C. § 103 is improper and should be withdrawn. As such, independent claims 1 and 9 as well as dependent claim 2-8 and 10-18 are in condition for allowance.

IV. CONCLUSION

Applicant submits that pending claims 1-18 represent a patentable contribution to the art and is in condition for allowance. Early and favorable action is accordingly solicited.

Respectfully submitted,

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